DOCUMENT RESUME

ED 202 837 SP 018 173

| | |
|---|---|
| TITLE | Course of Study Development. A Process Manual. |
| INSTITUTION | Ohio State Dept. of Education, Columbus. |
| PUB DATE | 80 |
| NOTE | 45p.; Colored pages may not reproduce clearly. |
| EDRS PRICE | MF01/PC02 Plus Postage. |
| DESCRIPTORS | *Core Curriculum; Course Descriptions; *Course Organization; Educational Objectives; Elementary Secondary Education; Needs Assessment; Program Evaluation; *School Districts; *State School District Relationship; *State Standards |
| IDENTIFIERS | *Ohio |

ABSTRACT

This model was prepared for the purpose of assisting school district personnel in Ohio to develop graded courses of study. A course of study is mandated by Ohio law to ensure commonality and continuity in the educational programs available to students within all school districts. Through identification of skills and concepts teachers are responsible for teaching, the course of study gives structure and direction to the educational program and is an official statement that prescribes what is to be taught in a given subject or area of study for all grades from K-12. It provides a broad definition of the education program in terms of philosophy, goals, and objectives. The appendices include samples of philosophy statements, goal statements, scope and sequence plans, and evaluation procedures. (JD)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

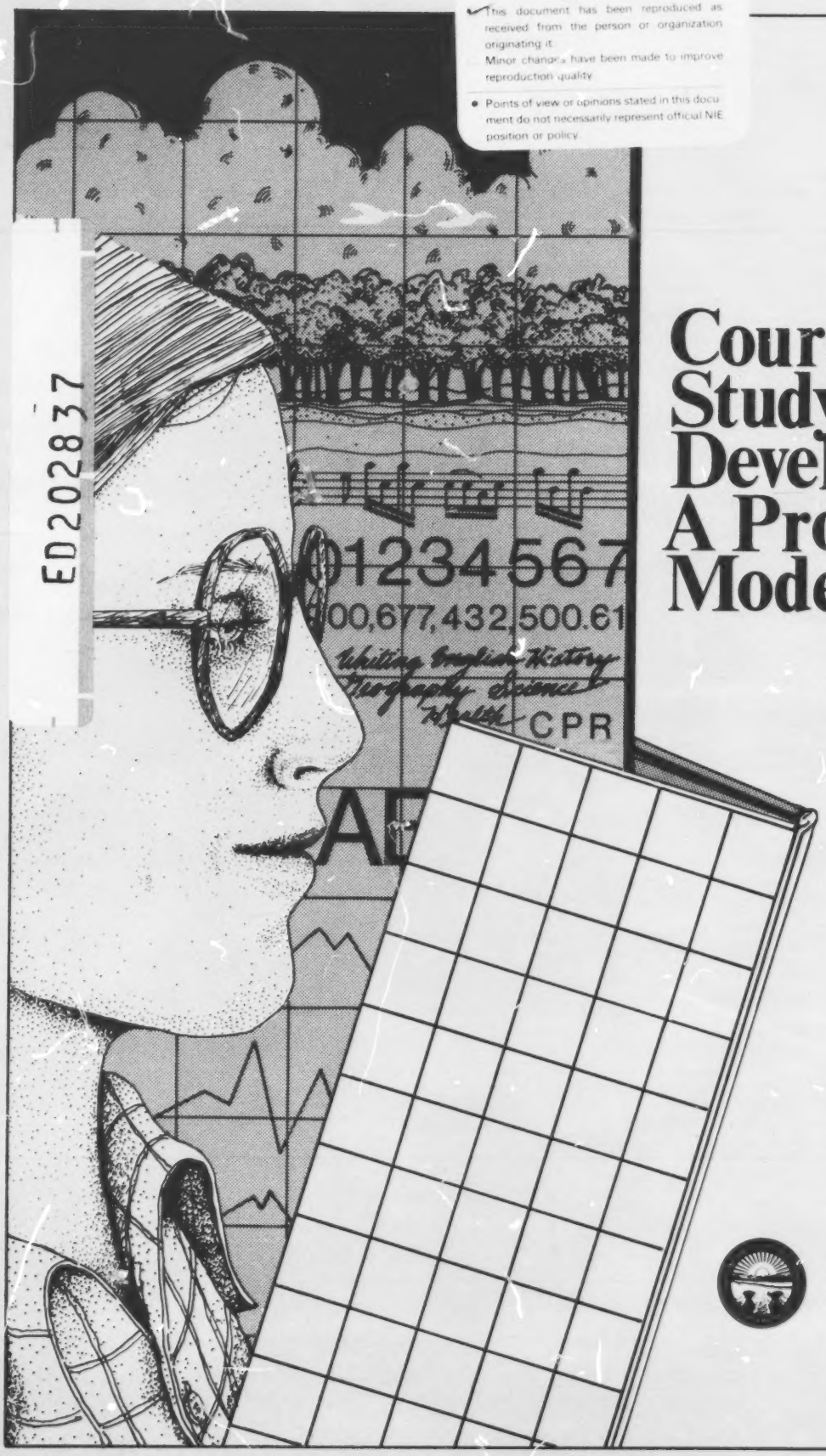
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Mary J Poston

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED202837




# Course of Study Development A Process Model

State of Ohio
Department of Education
Columbus, Ohio
1980

**STATE BOARD OF EDUCATION**

Martha W. Wise, *President, Elyria*
Roy D. McKinley, *Vice-President, Coshocton*
Martha B. Agler, *Columbus*
Wallace E. Blake, *Zanesville*
Richard C. Glowacki, *Toledo*
Robert W. Grosser, *Strongsville*
John E. Holcomb, *Akron*
Virginia E. Jacobs, *Lima*
Everett L. Jung, M.D., *Hamilton*
Thomas A. Kelty, *Poland*
Gerald D. Kisner, *Cleveland*
Benjamin B. Lavin, *Canton*
Mary R. Lindner, *Cincinnati*
Robert A. Lyons, Sr., *Dayton*
John R. Meckstroth, *Cincinnati*
Ward M. Miller, *Portsmouth*
Nancy L. Oliver, *Cleveland*
Donald S. Ritter, *Madison*
Anthony J. Russo, *Mayfield Village*
Ruth S. Schildhouse, *Columbus*
Wayne E. Shaffer, *Bryan*
Robert W. Walker, *Adena*
Robert E. Williams, *Xenia*

Franklin B. Walter
*Superintendent of Public Instruction*

Roger J. Lulow
*Assistant Superintendent*

Mary J. Poston
*Director, Division of Elementary and Secondary Education*

Doyle K. Shumaker
*Assistant Director, Division of Elementary and Secondary Education*

Ruthann M. Heintschel
*Course of Study Consultant*

Reid E. Baker
*Foreign Language Consultant*

Hazeldean M. Stent
*Language Arts Consultant*

Frank L. Schiraldi
*Social Studies Consultant*

Piyush Swami
*Science Consultant*

Cover Design By Rebecca Givler

"An Equal Opportunity Employer"

## TABLE OF CONTENTS


| | | Page |
|---|---|---|
| Introduction | | ii |
| Chapter One. | The Graded Course of Study | 1 |
| Chapter Two. | Developing the Graded Course of Study | 6 |
| | Program Philosophy | 6 |
| | Program Goals | 9 |
| | Scope and Sequence | 12 |
| | Evaluation Policies | 17 |
| Appendix A. | Course of Study Checklist and Record | 20 |
| B. | Program Evaluation Procedures | 21 |
| C. | Sample Philosophy Statements | 26 |
| D. | Sample Program Goal Statements | 27 |
| E. | Sample Scope and Sequence Plans | 28 |
| F. | Sample Evaluation Procedures | 35 |
| G. | Sample Action Verbs | Inside Back Cover |
| Acknowledgments | | Back Cover |

## INTRODUCTION

*Course of Study Development: A Process Model* has been prepared for the purpose of assisting school district personnel develop graded courses of study.

Section 3313.60, *Ohio Revised Code*, requires boards of education to prescribe a graded course of study for all schools under their control. The mandate applies to boards of education of all *county*, *exempted village*, and *city* school districts. State minimum standards extend the mandate to the corresponding authority in *nonlocally supported* school systems.

Under Section 3313.60, graded courses of study are subject to the approval of the State Board of Education. Courses of study submitted to the Ohio Department of Education are reviewed by the Division of Elementary and Secondary Education.

This *Process Model* is not intended to be restrictive, but rather guiding and suggestive. School district* personnel are encouraged to develop courses of study that are responsive to the needs of the time and to the pupils they serve.

For school district personnel responsible for curriculum review and course of study development this *Model* serves two purposes. First, the document serves to clarify the meaning of the graded course of study and its place in the instructional program. Second, the document provides a discussion of the components of the suggested course of study format.

The Appendices include a course of study format checklist, a suggested action plan for program evaluation, and sample statements for each component of the course of study format.

---

*Throughout this publication the use of the term "school district" refers to city, county, and exempted village school districts. The term as used here does not refer to a local district within a county.

## CHAPTER ONE
## THE GRADED COURSE OF STUDY

Since 1953, Section 3313.60 of the *Ohio Revised Code* has served as the legal basis for courses of study. This section of the *Revised Code* was amended in 1957 to require boards of education of county, exempted village, and city school districts to prescribe a graded course of study for all schools under their control subject to approval by the State Board of Education. The statute designated subjects which must be taught and established specific requirements for some subjects. Amendments enacted by the General Assembly in 1975, 1978, and 1980 increased the requirements.

The vast majority of school districts in Ohio are continually engaged in some phase of curriculum review. These activities are largely aimed at improving the educational program and developing graded courses of study in order to comply with Ohio law.

### What Is A Course Of Study

The course of study is both the *official statement* of what shall be taught in the schools of a school district, and a *form of communication*. As the official statement of what shall be taught, it represents an *educational commitment* on the part of the school personnel involved in its development and implementation and the board of education which approves it. As a form of communication, it tells school personnel clearly and concisely what is to be taught in a given subject or area of study for a particular grade or combination of grades. It also conveys to all interested persons an accurate description of what is currently being taught.

The course of study is primarily a *working document*, that gives both structure and direction to the educational program. The philosophy of the subject area, as stated in the course of study, should be consistent with the stated philosophy of the school and school district. Goals and objectives should be those which permit accurate assessment of the extent to which objectives are met.

Although educators often use the terms interchangeably, a graded course of study is not a curriculum guide. The course of study and the curriculum guide each have a separate function. The major differences between the two are:

| COURSE OF STUDY | CURRICULUM GUIDE |
|---|---|
| 1. *Prescribes* what *is to be* taught in a given subject or area of study. | 1. *Suggests* how a given subject or area of study *may be* taught. |
| 2. Is *general* in nature. Broadly defines the educational program in terms of philosophy, goals, and objectives. | 2. Is *specific* in nature. Contains suggestions as to instructional aids, materials, learning experiences, and teaching methods. |
| 3. Can be *changed* only by action of the *board of education.* | 3. Is *revised*, altered or amended *as necessary* at the discretion of *school personnel.* |

While there is no legal mandate to do so, school districts may elect to develop curriculum guides to supplement courses of study. The development of curriculum guides is strictly a matter of choice, whereas, boards of education are required by law to prescribe courses of study. *The curriculum guide cannot be considered a substitute for the course of study for purposes of compliance with the law.*

**Course of Study Mandates**

Section 3313.60, *Ohio Revised Code*, specifies subjects which must be taught and establishes specific requirements for some subjects. The following is the text of the statute, effective June, 1980.

*Sec. 3313.60, Boards of education of county, exempted village and city school districts shall prescribe a graded course of study for all schools under their control subject to the approval of the state board of education. In such graded courses of study there shall be included the study of the following subjects:*

*(A) The language arts, including reading, writing, spelling, oral and written English, and literature.*

*(B) Geography, the history of the United States and of Ohio, and national, state, and local government in the United States, including a balanced presentation of the relevant contributions to society of men and women of African, Mexican, Puerto Rican, and American Indian descent as well as other ethnic and racial groups in Ohio and the United States;*

*(C) Mathematics;*

*(D) Natural science, including instruction in the conservation of natural resources;*

*(E) Health education which shall include instruction in the nutritive value of foods, including natural and organically produced foods, the relation of nutrition to health, the use and effects of food additives, and the harmful effects of and legal restrictions against the use of drugs of abuse, alcoholic beverages, and tobacco, and venereal disease education, except that upon written request of his parent or guardian, a student shall be excused from taking instruction in venereal disease education;*

*(F) Physical education;*

*(G) The fine arts, including music;*

*(H) First aid, including a training program in cardiopulmonary resuscitation, safety and fire prevention, except that upon written request of his parent or guardian, a student shall be excused from taking instruction in cardiopulmonary resuscitation.*

*Every school shall include in the requirements for promotion from the eighth grade one year's course of study of American history.*

*Every high school shall include in the requirements of graduation from any curriculum one unit of American history and government, including a study of the constitution of the United States and of Ohio.*

*Basic instruction in geography, United States history, the government of the United States, the government of the state of Ohio, local government in Ohio, the Declaration of Independence, the United States Constitution, and the Constitution of the state of Ohio shall be required before pupils may participate in courses involving the study of social problems, economics, foreign affairs, United Nations, world government, socialism, and communism*

The minimum standards for Ohio elementary schools, junior high schools, and high schools also require that certain subjects be taught. The standards should serve as guides for determining, at a minimum, those subject areas for which courses of study should be prescribed.

In following the directive to prescribe a course of study for each subject taught in the schools, school district personnel may choose to take one of two options. The first and more traditional approach is to develop a course of study for *every course* taught in the schools of that district.

The second option allows school district personnel to develop *K-12 courses of study* for major subject areas, such as language arts, mathematics, and social studies. These documents specify the goals and objectives for the total program rather than for specific courses. If this option is selected, each course taught in the major subject area should be identified in the course of study.

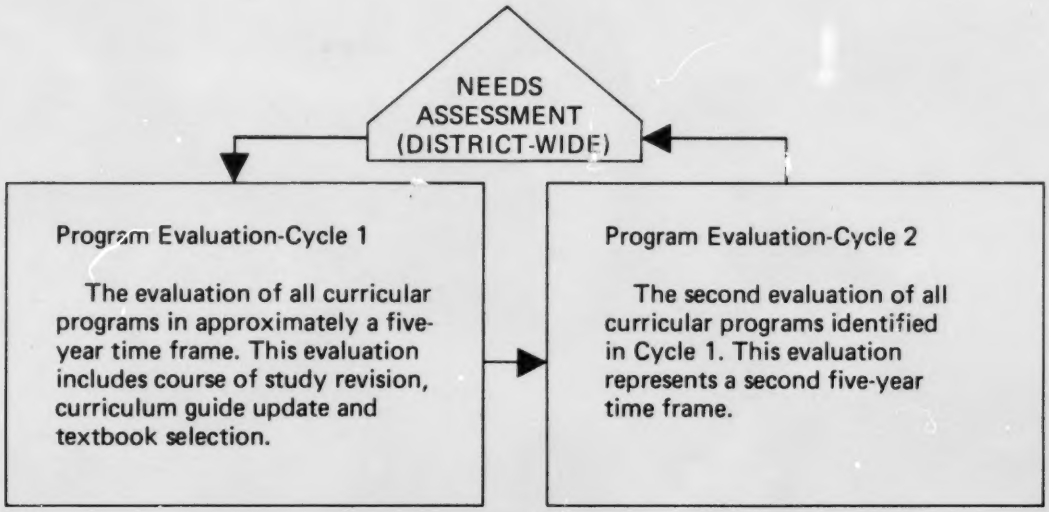
**Curriculum Review**

The curriculum review process is facilitated through course of study development. Basic to all curriculum development and course of study review efforts is an assessment of present conditions and goals. Without such appraisal, developmental activities tend to lack purpose. Several techniques may be used to assess the present conditions and educational goals of a district. The *needs assessment* represents but one of these techniques.

A needs assessment represents a comprehensive inquiry into the educational status of a school district. It is an activity designed to establish goals and priorities for a school district. A needs assessment involves the systematic collection and use of data to identify educational needs and to determine to what degree the school district is implementing its stated philosophy of education and to what degree goals are being met by existing educational programs.

The success of a needs assessment is enhanced when resources from many constituencies are obtained. Some of these constituencies are administrators, curriculum experts, community members, parents, teachers, and students. Large scale involvement promotes an attitude of *ownership* which, in turn, gives greater promise for increased community satisfaction with and support for educational institutions.

School districts are urged to develop a time schedule for the needs assessment study which may be conducted over five, ten, or more years. A sample ten year plan is shown below:


NEEDS ASSESSMENT (DISTRICT-WIDE)
Program Evaluation-Cycle 1
The evaluation of all curricular programs in approximately a five-year time frame. This evaluation includes course of study revision, curriculum guide update and textbook selection.
Program Evaluation-Cycle 2
The second evaluation of all curricular programs identified in Cycle 1. This evaluation represents a second five-year time frame.

A second step in curriculum review is *program evaluation*. Program evaluation should involve a periodic review of the program goals and objectives in terms of their appropriateness and the extent to which they are being attained.

Program evaluation enables school personnel to determine, first, those instructional elements, curriculum components, learning settings and program activities that have the greatest positive effect on learning, and second, those areas of the program that require attention. It is advisable to begin by an evaluation of the existing course of study. This appraisal should ascertain whether or not the existing program adequately serves the interests, needs, and abilities of the students in the school.

Program evaluation should include, among others, the following activities:

1. Reviewing the appropriateness of existing goals and objectives,
2. Developing criteria for evaluating goals and objectives,
3. Identifying factors related to the attainment of program goals and objectives.

As the model on the following page illustrates, all curriculum review and course of study development should be viewed in terms of the impact on the individual learner. Goals, objectives, and teaching strategies should all be directed toward student learning. Daily lessons based on identified program goals and objectives should serve to enhance student learning.

Curriculum review and course of study development should include those who will be expected to implement the programs. Teachers and administrators will implement the programs, hence, the need to (1) have both groups involved personally in the development process, and (2) provide both groups with inservice activities designed to facilitate program implementation.

A systematic plan of action is essential for effective program evaluation. One suggested plan is presented in Appendix B.

**Considerations for Course of Study Approval**

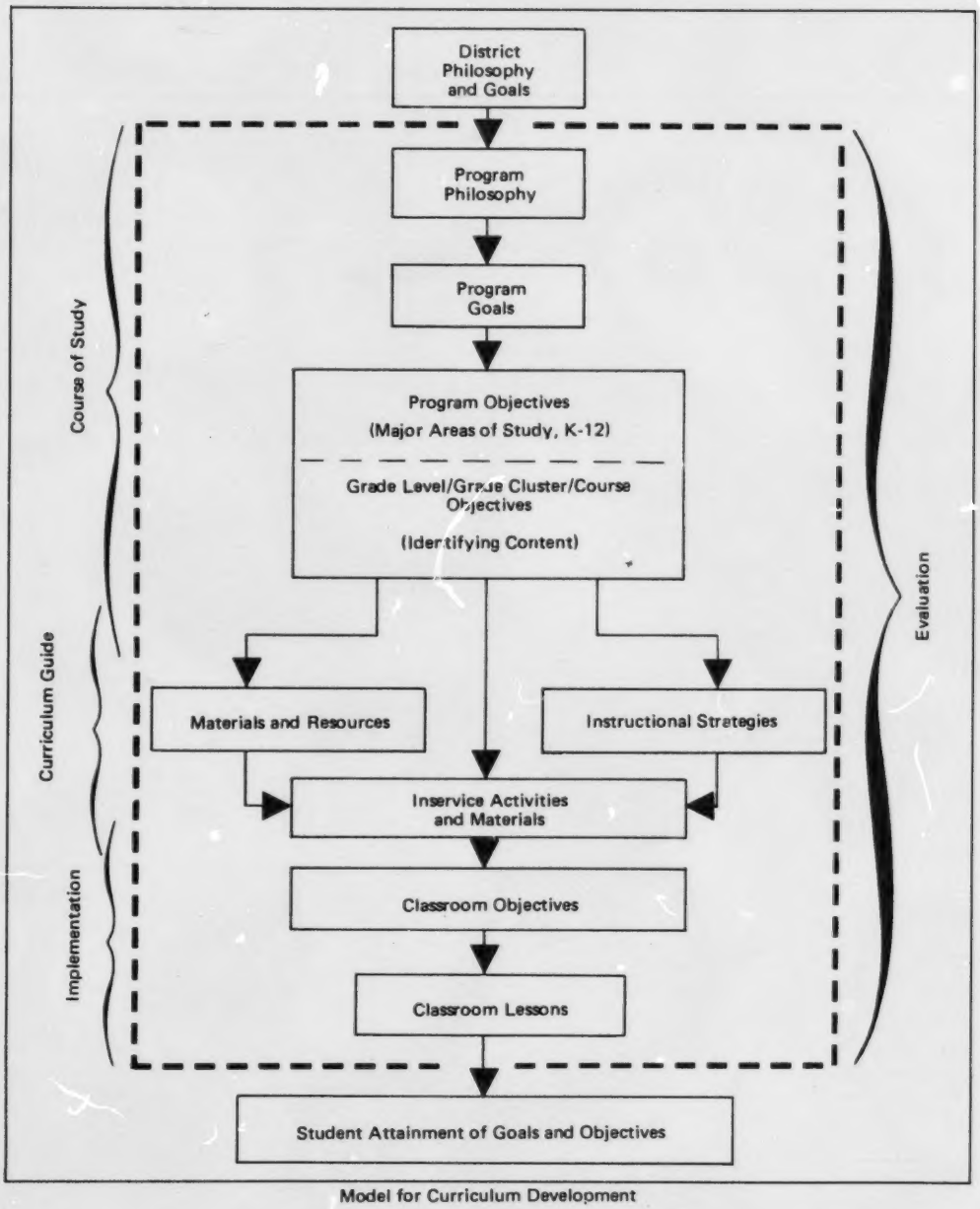
Courses of study submitted for review and approval *must* contain an official statement of prior approval by the board of education of county, exempted village, or city school districts or by the proper authority in nontax supported schools and school systems.

A local school district in a county system may, with prior approval of the county board of education, develop a course of study which differs significantly from the county course of study. In such cases, the local course of study *must* be submitted to the county board of education for approval and subsequently to the State Department of Education. In addition, the local course of study should state specifically that it applies only to the schools in that local district.

**Services Available**

The staff of the Division of Elementary and Secondary Education is available for consultation. School districts developing graded courses of study are urged to contact individual staff members for assistance.

A Course of Study Library has been established in the Division of Elementary and Secondary Education, Room 1005, 65 South Front Street, Columbus, OH 43215. The library is open to all educators.




Model for Curriculum Development

**Summary**

Course of study requirements are not new in Ohio schools. For years school district personnel have engaged in curriculum review and course of study development in order to provide quality educational programs for students. Four reasons make the course of study essential to a school district's educational program. First, the course of study is mandated by Ohio law. Second, the course of study ensures commonality and continuity in the educational program available to students within school districts. Third, the course of study gives parents and students an accurate description of the content that will be covered during a school year. And fourth, the course of study identifies the skills and concepts teachers are responsible for teaching.

## CHAPTER TWO
## DEVELOPING THE GRADED COURSE OF STUDY

Courses of study submitted to the Ohio Department of Education for approval should include these components:

1. Statement of Approval by the Board of Education
2. Table of Contents
3. Introduction
4. Program Philosophy
5. Program Goals
6. Scope and Sequence
7. Evaluation Policies

The introduction to the course of study should state (1) the function of the document, (2) the school system it will serve, and (3) how it is to be used by teachers, administrators, and boards of education.

### PROGRAM PHILOSOPHY

A philosophy is essential to course of study review and development. By bringing together the curricular organization, instructional procedures, learning roles, resource selection, and other components of school planning, the philosophy provides direction for decision making in a school district.

The statement of philosophy for each program of study taught within a district should be consistent with the district and building philosophies. The district philosophies provide a rationale for the total school district program. The building philosophies furnish the base upon which programs are built. Program philosophies apply directly to courses offered such as science, foreign language, and music. While the developmental process of these philosophical statements is similar, the district and building philosophies reflect the broader framework of education and the program philosophies reflect the goals of a single curricular program.

#### Position Statements

The process of developing a philosophy statement often brings to light controversial issues. The curriculum committee may develop statements on such issues which will serve as guides to teachers in the district. While position statements may be included in the course of study, they should be kept separate from the philosophy statements.

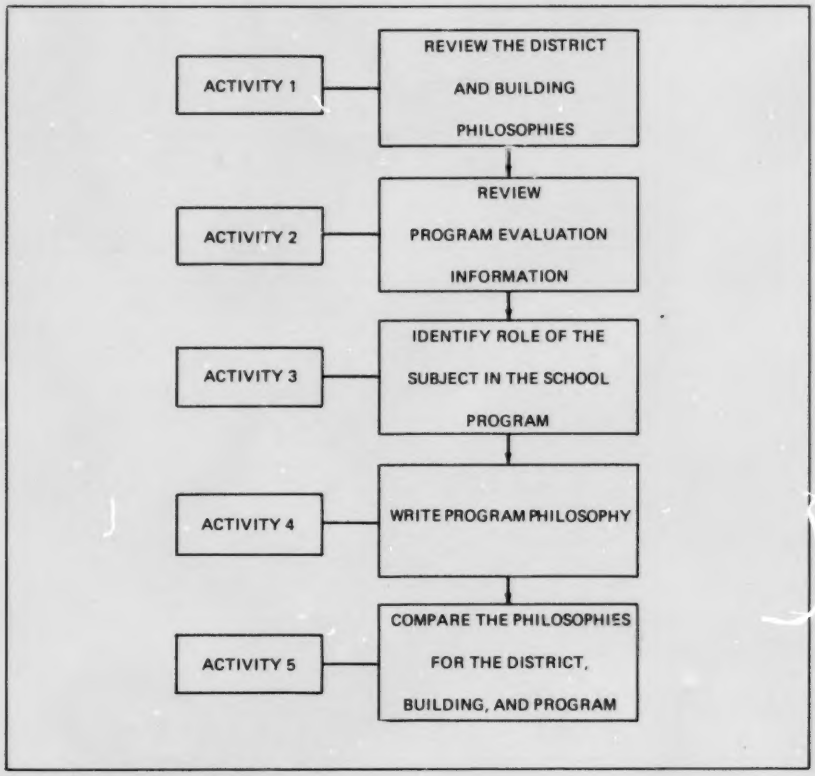
#### Developing A Program Philosophy

Establishing a program philosophy is a vital first step in the process of course of study review and development. The program philosophy states the rationale for including a particular subject in the school curriculum. This may be described either in the form of beliefs about what students need or what a subject can contribute toward fulfilling the general purposes of formal education. Those charged with this activity have an enormous responsibility to articulate their positions in a clear, concise, and forthright manner. Without clearly stated reasons for a subject's inclusion as an important part of the total curriculum, the philosophy statement fails to give direction to the program of study.

In developing these philosophical statements for programs, those involved in the process should consider, among others, questions such as:

- What is the purpose of the program?
- What can this program do better than any other curricular program?
- Should the activities of this program stress cooperation, competition, or both?
- Should curricular programs deal with controversial issues, or only those ideas for which there is established knowledge?
- Should attitudes be taught, basic skills, problem solving strategies?
- Should the curriculum be based on the needs of the local community, society in general, expressed needs of students?

The model below suggests that the formulation of a program philosophy consists of five activities.


ACTIVITY 1
REVIEW THE DISTRICT AND BUILDING PHILOSOPHIES
ACTIVITY 2
REVIEW PROGRAM EVALUATION INFORMATION
ACTIVITY 3
IDENTIFY ROLE OF THE SUBJECT IN THE SCHOOL PROGRAM
ACTIVITY 4
WRITE PROGRAM PHILOSOPHY
ACTIVITY 5
COMPARE THE PHILOSOPHIES FOR THE DISTRICT, BUILDING, AND PROGRAM

Program Philosophy Process Model

Points for consideration and tasks to be performed in each of the five activities are discussed below. These may be modified as required by the needs of the individual school district.

## Activity 1
## REVIEW THE EDUCATIONAL PHILOSOPHIES OF THE DISTRICT AND BUILDING

Points to Consider:

1. The role of the school in the personal development of an individual.

2. The role of the school in meeting the needs of the society at large.
3. The scope of general education for all.
4. The role of the school in providing special education.
5. The role of any specific subject in the school program.
6. The role of the community, school staff, and students.
7. Current controversial issues.

Tasks to Perform:

1. Make a list of the beliefs stated in each of the following categories:
   A. Needs of the individual.
   B. Needs of the society.
2. Make a list of other ideas included in the philosophy statement such as general education, special education, or controversial issues.

## Activity 2
## REVIEW THE PROGRAM EVALUATION INFORMATION

Points to Consider:

1. Information received from the school staff concerning the particular subject.
2. Information received from the current students and graduates concerning the particular subject.
3. Community information (parents, employers, and other community agencies) concerning the preparation of students.

Tasks to Perform:

1. Make a list of the strengths and weaknesses in the program.
2. Decide upon a direction for the program based on the program evaluation information.

## Activity 3
## IDENTIFY THE ROLE OF THE PARTICULAR SUBJECT IN THE SCHOOL PROGRAM

Points to Consider:

1. Role of the subject in promoting general education and special education.
2. Role of the subject in providing for:
   A. Individual development.
   B. Fulfillment of the needs of the society.
3. Special contributions of the subject in enhancing the entire school program.

Tasks to Perform:

1. List separately the specific needs of the individual and the society that should be fulfilled by the subject. (Consider the current program and program evaluation information. Activity 2).
2. Identify the role of the subject in relation to the philosophy statements for the district and building (Activity 1).

Activity 4
WRITE THE PROGRAM PHILOSOPHY

Points to Consider:
1. Relation of the building and district philosophies to the program philosophy.
2. Use of clear and concise language.

Tasks to Perform:
1. List any features peculiar to the subject.
2. List beliefs concerning the importance of the subject in relation to the entire school program.
3. Develop a philosophy statement.
4. Make a list of any controversial issues which require position statements (to be developed separately).

Activity 5
COMPARE THE PHILOSOPHY
STATEMENTS FOR THE DISTRICT,
BUILDING, AND PROGRAM

Points to Consider:
1. Role of the program in fulfilling the building and district philosophy.
2. Role of the program in general and special education.

Tasks to Perform:
1. Develop a list of variances identified among the different philosophy statements.
2. Revise the program philosophy as necessary.

## PROGRAM GOALS

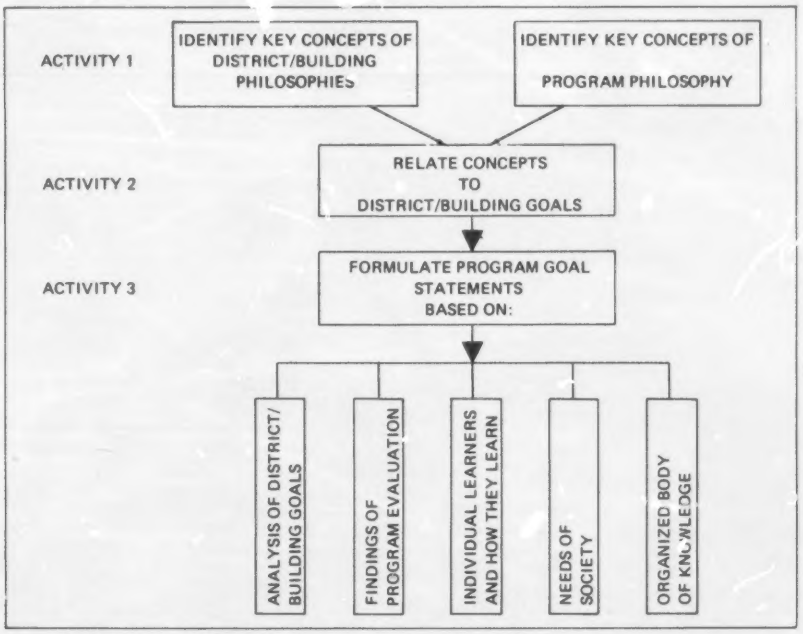
Program goals are broad, general statements of desired outcomes for a subject area. In this sense, they represent an intermediate step in the process of translating program philosophy into specific objectives. Program philosophy, which is primarily a rationale for the subject area, states *why* the program is an essential part of the total curriculum. Program goals define the overall nature and content of the subject area, establishing the broad dimensions of *what* is expected as program outcomes. Program goals are an important component of the course of study because:

- they communicate the nature and content of the subject area program to students, parents, teachers, administrators, and other publics;
- they give shape and direction to the program by identifying the knowledge, skills, and judgments the students will be expected to demonstrate at the end of the program; and
- they provide a cohesive framework for instruction and help to avoid fragmentation.

**Developing Program Goals**

Formulation of program goals should be preceded by a careful, thorough consideration of (1) individual learners and how they learn, (2) society and its forces, and (3) the organization of knowledge in the subject area. Validation of program goals should be continuous, based on data obtained from a study of students, the needs of society, and current trends in the subject areas.

A suggested process for program goal formulation consists of three major activities. These activities and their logical progression in the formulation process are outlined in the model below. Each of the activities is discussed.


ACTIVITY 1
IDENTIFY KEY CONCEPTS OF DISTRICT/BUILDING PHILOSOPHIES
IDENTIFY KEY CONCEPTS OF PROGRAM PHILOSOPHY
ACTIVITY 2
RELATE CONCEPTS TO DISTRICT/BUILDING GOALS
ACTIVITY 3
FORMULATE PROGRAM GOAL STATEMENTS BASED ON:
ANALYSIS OF DISTRICT/ BUILDING GOALS
FINDINGS OF PROGRAM EVALUATION
INDIVIDUAL LEARNERS AND HOW THEY LEARN
NEEDS OF SOCIETY
ORGANIZED BODY OF KNOWLEDGE
Program Goal Process Model

## Activity 1
## IDENTIFY KEY CONCEPTS OF PHILOSOPHY STATEMENTS

District and Building Philosophies

1. Which concepts have meaning for our students?
2. Are any of these concepts related to specific curricular areas?
3. If so, to which specific curricular areas do they correspond?
4. Do any of these concepts have significance for *all* curricular areas?

List these concepts in a comparison table such as the one suggested on the next page. In listing the concepts from the building philosophy, draw parallels with the concepts of the district philosophy.

Program Philosophy

1. What are the key concepts of the program philosophy?
2. Do these concepts correspond to those identified in the district and building philosophy statements?
3. Have any key concepts relative to this program been omitted?

List these concepts in a comparison table such as the one suggested on the next page. In listing the concepts, draw parallels with the concepts from the district and building philosophies.

## Activity 2
## RELATE CONCEPTS TO DISTRICT AND BUILDING GOALS

1. Have goal statements been formulated at the district and building level?
2. If so, do these statements correspond to the concepts identified in Activity 1?
3. Do the concepts of the program philosophy reflect the district and building goals?
4. Indicate the correspondence of the program philosophy to the district and building goals.

List the goal statements in a comparison table such as the one suggested below. In listing the goal statements, draw parallels with the items already listed in the table.

TABLE OF COMPARISON
FOR
PHILOSOPHY AND GOAL STATEMENTS

| I | II | III | IV | V |
|---|---|---|---|---|
| DISTRICT PHILOSOPHY (KEY CONCEPTS) | BUILDING PHILOSOPHY (KEY CONCEPTS) | PROGRAM PHILOSOPHY (KEY CONCEPTS) | DISTRICT GOALS | BUILDING GOALS |
| LIST THE KEY CONCEPTS OF THE PHILOSOPHY STATEMENT. | LIST THE KEY CONCEPTS OF THE PHILOSOPHY STATEMENT.<br><br>DRAW PARALLELS WITH THE CONCEPTS IN COLUMN 1. | LIST THE KEY CONCEPTS OF THE PHILOSOPHY STATEMENT.<br><br>DRAW PARALLELS WITH THE CONCEPTS IN COLUMNS I AND II. | LIST THE GOAL STATEMENTS.<br><br>DRAW PARALLELS WITH THE CONCEPTS IN COLUMNS I, II, AND III. | LIST THE GOAL STATEMENTS.<br><br>DRAW PARALLELS WITH THE CONCEPTS IN COLUMNS I, II, III, AND IV. |

## Activity 3
## FORMULATE PROGRAM GOAL STATEMENTS

1. Determine content for program goal statements based on:
   - A. Analysis of district and building goals.
     - 1) Which of these goals pertain to this program?
     - 2) How can they be worked into the program goals?
   - B. Findings of program evaluation.
     - 1) What data from the program evaluation have significance for program goal development?
     - 2) How can this data be incorporated into the goal statements?
   - C. Individual learners and how they learn.
     - 1) What do research and experience tell us about individual learners and how they learn?
   - D. Needs of society.
     - 1) What needs of society should be addressed in this program?
     - 2) Should our goal statements reflect these needs?

E. Organized body of knowledge.
   1) What are the major components of this subject area?
   2) Should each component be the basis for a program goal statement?

2. Formulate program goal statements based on the above considerations.

In a table such as the one suggested below:

1) Summarize and organize the findings in each of the above five areas.
2) List them in order of importance.
3) Check each item off as goal statements are formulated.

FORMULATING PROGRAM GOALS
A SUMMARY

| DISTRICT AND BUILDING GOALS | FINDINGS OF PROGRAM EVALUATION | INDIVIDUAL LEARNERS AND HOW THEY LEARN | NEEDS OF SOCIETY | ORGANIZED BODY OF KNOWLEDGE |
|---|---|---|---|---|
| | | | | |
| | | | | |

## SCOPE AND SEQUENCE

After the program philosophy and program goals have been formulated, the next step is to determine program objectives. This step enables school planners to identify the content (scope) of each program at each level (sequence) of instruction.

The relationship of program philosophy, program goals, and program objectives assures continuity in the program. At the same time it permits curriculum developers to view the program in totality and to avoid redundancy, gaps, and inconsistencies.

### Determination of Scope

The *scope* of the program is its breadth as defined by the program objectives. The dimensions of the program emerge through the process of formulating program objectives.

Program objectives are broad outcome statements derived from program goals. Program objectives reflect and define more explicitly the nature and content of the subject area. Program objectives are learner outcome statements encompassing the entire program. The following chart gives an example of a program goal and two of the many program objectives which may be derived from it.

PROGRAM GOAL
Enable students to understand and apply basic mathematical skills and concepts.

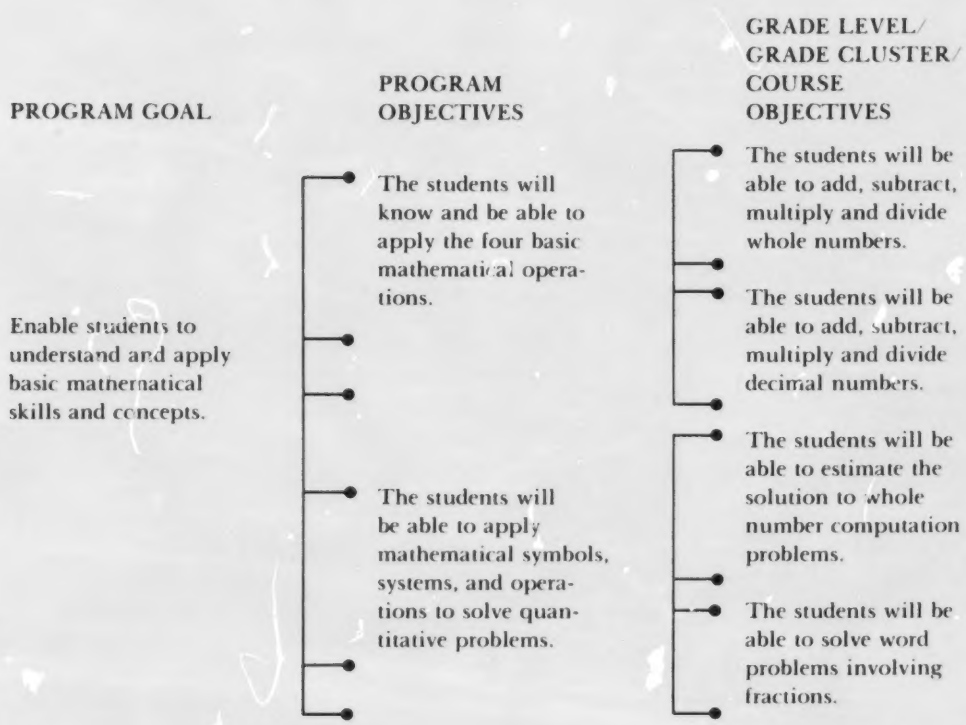
PROGRAM OBJECTIVES
The student will know and be able to apply the four basic mathematical operations.

The student will be able to apply mathematical symbols, systems, and operations to solve quantitative problems.

Program objectives, however, constitute only one level of objectives. The total scope of the program comprises objectives formulated on two additional levels.

Grade level/grade cluster/course objectives are more specific in nature and indicate the desired learning outcomes for a given grade level, grade cluster, or specific course. The objectives facilitate grade level or course planning and assessment. They are the basis for student grading.

The progression of grade level/grade cluster/course objectives from the program goal and program objective can be illustrated by expanding the above example as follows:


PROGRAM GOAL
Enable students to understand and apply basic mathematical skills and concepts.
PROGRAM OBJECTIVES
The students will know and be able to apply the four basic mathematical operations.
The students will be able to apply mathematical symbols, systems, and operations to solve quantitative problems.
GRADE LEVEL/ GRADE CLUSTER/ COURSE OBJECTIVES
The students will be able to add, subtract, multiply and divide whole numbers.
The students will be able to add, subtract, multiply and divide decimal numbers.
The students will be able to estimate the solution to whole number computation problems.
The students will be able to solve word problems involving fractions.

Both program objectives and grade level/grade cluster/course objectives are a part of the course of study. The third level objectives are not a part of the course of study. These objectives are classroom objectives which serve as the guide for a particular lesson or teaching unit. Classroom objectives are directed toward the eventual achievement of a grade level/grade cluster/course objective and finally the achievement of a program objective. Classroom objectives state explicitly the results that may be expected from the particular unit of instruction.

Objectives at all three levels should address intellectual skills, cognitive strategies, verbal information, psychomotor skills, and the affective domain. Objectives designed to address each of these learning areas permit the curriculum developer to (1) group specific objectives of a similar nature together, (2) determine the sequence of segments of a course of study, and (3) plan the conditions required for successful learning.

### Identifying the Sequence

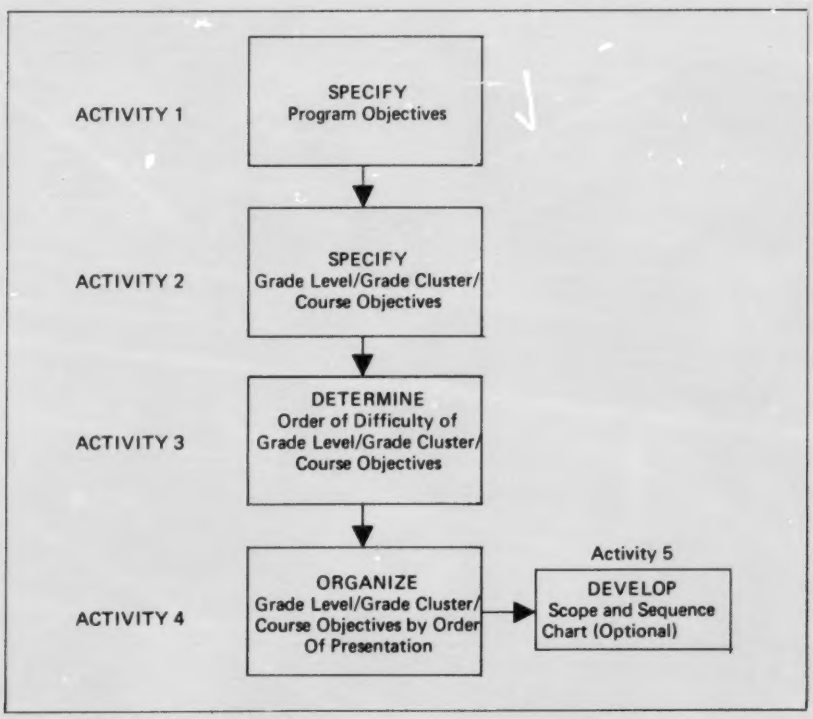
Any one program objective and its grade level/grade cluster/course objectives are preceded and followed by other program objectives and their grade level/grade cluster/course objectives. *Sequencing* is the process of arranging these objectives into a pattern which shows the prerequisite relationships among them. Sequencing gives an order of presentation of objectives between grades or within a grade, a subject, or a series of objectives. The sequence order is determined by a wide variety of theories, such as those concerning the abilities, interests, experiences, and needs of the students.

### Developing a Scope and Sequence

As school personnel engage in activities designed to develop the scope and sequence of a program, several questions need to be considered.

1. What program objectives can be derived from the program goals?
2. What grade level/grade cluster/course objectives can be generated from program objectives?
3. What is the order of difficulty of grade level/grade cluster/course objectives?
4. At what grade levels should readiness, introductory, developmental, mastery, and reinforcement activities be expected?
5. How do the program objectives and the grade level/grade cluster/course objectives compare with the findings of the program evaluation?

A suggested process for developing a scope and sequence consists of five activities. These activities are outlined in the model shown below. A discussion of each of these activities follows:




Scope and Sequence Process Model

Activity 1

## SPECIFY PROGRAM OBJECTIVES

Setting the Stage:

1. What have we said before?
   - A. What does the board of education philosophy say?
   - B. What does the program philosophy say?
   - C. What do the program goals say?

Getting Ready to Write

2. What do we have to say about the program goals of the subject?
   - A. What ideas can be generated from the program goals?
   - B. What ideas do we accept?
   - C. What ideas do we discard?

Getting Ready to Finalize:

3. What are the important objectives?
   - A. How can we combine them?
   - B. How can they be restated?
   - C. Do we have too many?
   - D. Do we have too few?
   - E. Do the objectives speak to the curricular area?
   - F. Are the program objectives stated in general terms?

Reviewing the Product:

4. What have we said to this point?
   - A. Do all the program objectives reflect the program goals?
   - B. Do they make sense in relationship to each other?
   - C. Are all program goals reflected in the objectives?

Activity 2

## SPECIFY GRADE LEVEL/GRADE CLUSTER/COURSE OBJECTIVES

Setting the Stage:

1. What have we done so far?
   - A. What does the program philosophy say?
   - B. What do the program goals say?
   - C. What do the program objectives say?
   - D. Do all of the above follow an orderly pattern?
   - E. From the above items is there a normal progression from one to the other?

Getting Ready to Write:

2. What are the more specific objectives that can be derived from *each* of the program objectives?
   - A. What concepts can be identified from each program objective?
   - B. Have we covered all possibilities?

Reviewing the Objectives:

3. Have we put the objectives in the right combinations?
   - A. Under which program objective do the grade level/grade cluster/course objectives fit?

B. Do we need to do any shifting?
C. Are there still other grade level/grade cluster/course objectives to be included?

## Activity 3
## DETERMINE ORDER OF DIFFICULTY OF GRADE LEVEL/ GRADE CLUSTER/COURSE OBJECTIVES

Setting the Stage:

1. Where do we stand now?
   A. Did we write comprehensive program objectives?
   B. Did we exhaust the possibilities for grade level/grade cluster/course objectives?
   C. Are the grade level/grade cluster/course objectives properly aligned with each of the program objectives?
   D. What decisions did we make about interrelated objectives?

Getting Ready to Sequence:

2. What do we know about the subject area that will help us put the objectives in order of difficulty?
   A. Using each program objective and its concomitant grade level/grade cluster/course objectives, which objectives should be learned first, second, third . . . ?
   B. Is there a priority for objectives if two or more are of equal difficulty or importance?

Sequencing:

3. What method will we use to allow for easy shifting and sifting of objectives?
   A. Will we cut and paste?
   B. Will we have a recorder?
   C. What do we do with the leftovers, if any?

Reviewing the Product:

4. Do we have everything where we want it?
   A. Do the grade level/grade cluster/course objectives follow sequence of difficulty?
   B. Have we placed these objectives in a sequence of difficulty?
   C. Does each objective logically follow the preceding objective?
   D. Have superfluous or repetitive objectives been eliminated?
   E. Is the language of each objective clear and concise?

## Activity 4
## ORGANIZING GRADE LEVEL/GRADE CLUSTER COURSE OBJECTIVES BY ORDER OF PRESENTATION

Setting the Stage:

1. What have we completed thus far?
   A. Have all possible forms of sequencing been explored?
   B. Do we need to review the sequence choices?
   C. Are we in general agreement about the levels of difficulty?

Getting Ready to Place at Grade Level:

2. At what grade level will:
   A. Readiness objectives be used?
   B. Introductory objectives be used?
   C. Developmental objectives be implemented?

D. Mastery of objectives be expected?
E. Reinforcement objectives be continued?

Activity 5 (optional)
DEVELOP SCOPE AND SEQUENCE CHART

Setting the Stage:
1. What organizational structure do we have?
   A. Have we identified order of presentation for each objective?
   B. Have we identified readiness, introductory, developmental, mastery, and reinforcement levels for each objective?

Getting Ready to Chart the Sequence:
2. What kind of chart do we want to use to show order of presentation of objectives?
   A. Will the chart indicate K-12 . . . . . ?
   B. What terms, and abbreviations will we use to indicate: readiness, introduction, development, mastery, and reinforcement?

Putting it all Together:
3. Who does what and when?

## EVALUATION POLICIES

Evaluation of students should reflect the instructional needs of individual students in relation to the attainment of program goals and objectives.

A student evaluation program based on clearly stated objectives increases the likelihood that instructional programs and learning situations are designed to ensure attainment of specific outcomes. Careful examination of the correlation between tests, testing procedures, testing frequency and the stated program objectives is vital to student evaluation. Care must be taken in selecting or creating tests to ensure that they reflect both the program objectives and the desired learning outcomes.

The evaluation of students should be positive and should always be used to help the student in the learning process.

A suggested process for developing student evaluation policies consists of four activities. A discussion of each follows.

Activity 1
REVIEW DISTRICT, BUILDING, AND PROGRAM PHILOSOPHIES
Are there any key concepts that have implications for student evaluation?

Activity 2
REVIEW DISTRICT AND BUILDING STUDENT EVALUATION POLICIES
Do they place any restrictions on student evaluation policies for a curricular area?

Activity 3
FORMULATE STUDENT EVALUATION POLICIES
The following are some considerations that might form the basis for formulating student evaluation policies:

1. Should students be evaluated according to:
   - their progress in attaining the program objectives?
   - the degree to which they meet external standards (e.g., national norms?)
   - other?
2. What types of tests should be used and in what balance?
   - teacher prepared?
   - textbook correlated?
   - standardized?
   - other?
3. What strategies should be employed for:
   - diagnostic evaluation?
   - evaluation of achievement?
4. What other types of test items are best suited to the evaluation of specific objectives?
   - multiple choice?
   - true/false?
   - matching?
   - essay?
   - open-ended questions?
   - other?
5. What additional means of obtaining evaluation evidence should be employed?
   - behavior checklists?
   - attitude scales?
   - interest inventories?
   - audio or video recordings?
   - questionnaires?
   - interviews?
   - performance tests?
   - anecdotal records?
   - self analysis?
   - other?
6. How frequently should students be tested?
7. What elements should be included in the determination of grades, and in what proportion?
   - quizzes?
   - final examination?
   - oral presentations?
   - individual projects?
   - group projects?
   - classroom behavior?
   - effort/attitude?
   - study habits?
   - other?

8. To what extent should self-evaluation of students be encouraged?

9. What kinds of evaluation information should be given to:

- students?
- parents?
- administrators?
- counselors?
- colleges?
- prospective employers?
- other?

Activity 4

## REVIEW STUDENT EVALUATION POLICIES

Are policies consistent with:

- district, building, and program philosophies?
- district and building student evaluation policies?

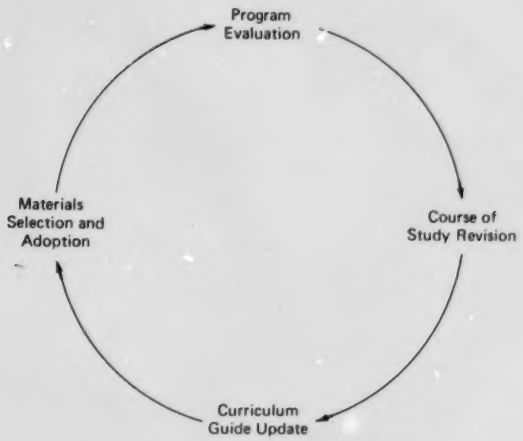
## APPENDIX A
## COURSE OF STUDY CHECKLIST AND RECORD

| FORMAT AND RECORD OF APPROVAL | PROGRAM AREAS | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LANGUAGE ARTS | MATHEMATICS | SCIENCE | SOCIAL STUDIES | FOREIGN LANGUAGE | PHYSICAL EDUCATION | HEALTH | ART | MUSIC | | | OTHER | | | | |
| INDICATION OF BOARD APPROVAL | | | | | | | | | | | | | | | | |
| TABLE OF CONTENTS | | | | | | | | | | | | | | | | |
| INTRODUCTION | | | | | | | | | | | | | | | | |
| PROGRAM PHILOSOPHY | | | | | | | | | | | | | | | | |
| PROGRAM GOALS | | | | | | | | | | | | | | | | |
| SCOPE AND SEQUENCE | | | | | | | | | | | | | | | | |
| EVALUATION POLICIES | | | | | | | | | | | | | | | | |
| DATE SUBMITTED TO DEPARTMENT OF EDUCATION | | | | | | | | | | | | | | | | |
| DATE STATE APPROVAL GRANTED | | | | | | | | | | | | | | | | |

## APPENDIX B:
## PROGRAM EVALUATION PROCEDURES

Program evaluation should be a periodic activity for a school district. It involves establishing a set of desired conditions or outcomes for a curricular area, gathering data indicative of the degree to which those outcomes are being attained, measuring the variance between the two sets of information, and determining priorities based on the new information.

A program evaluation should be correlated with activities such as course of study revision, curriculum guide update, and materials selection. Ideally, program evaluation should precede these activities. Eventually, these four activities should occur on a cyclical basis as suggested in the diagram below:

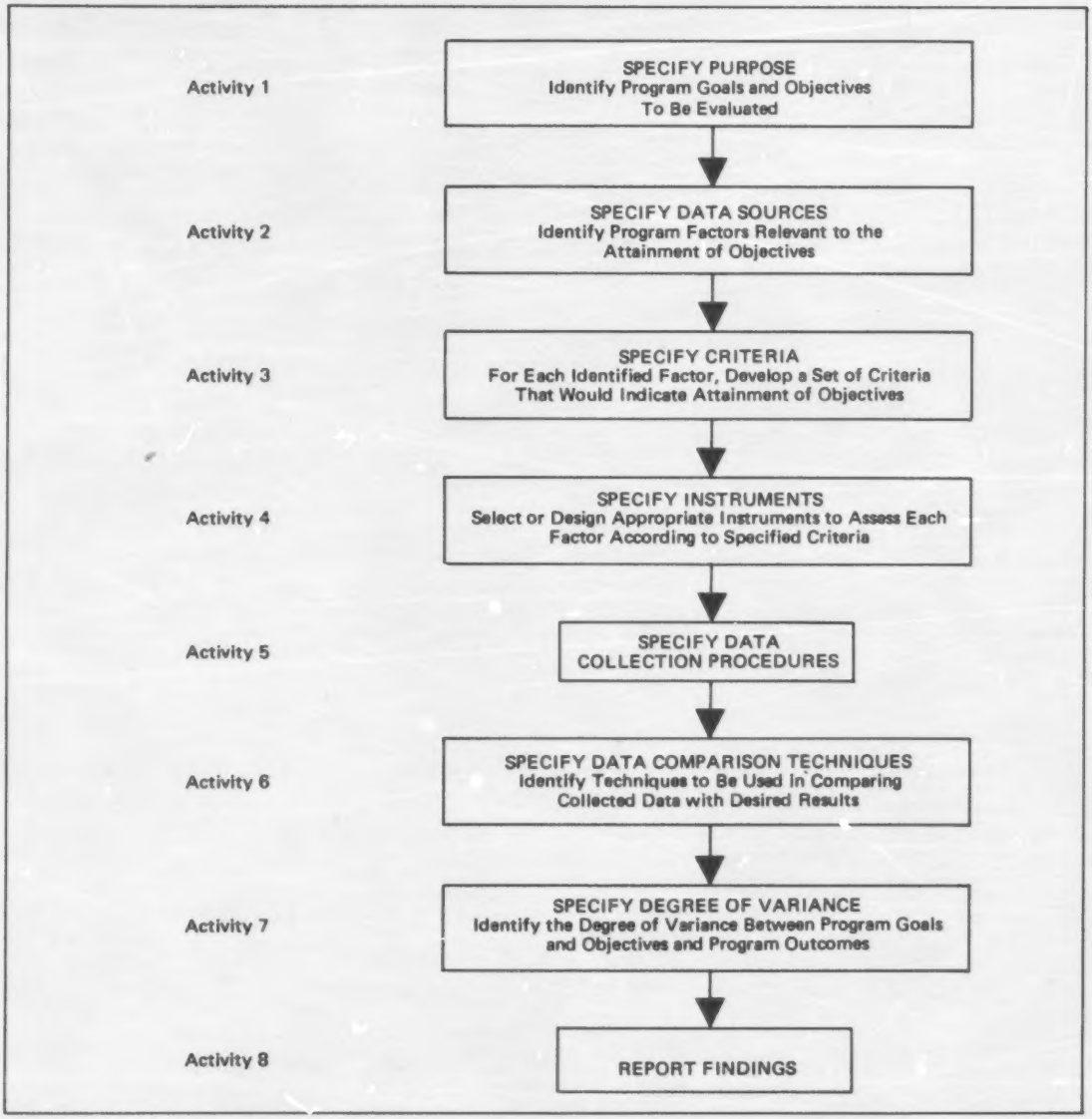



In this sense, program evaluation involves more than the measurement of student attainment of goals and objectives. Student attainment of goals and objectives is just one part of the whole. Program evaluation should also determine which instructional elements, curriculum components, learning settings, and program activities have the greatest positive effect on learning.

In conducting program evaluations several questions need to be addressed:

1. Do the existing courses of study have goals and objectives?
2. Are these goals and objectives stated in such a way that they may be evaluated?
3. What factors are related to the attainment of the goals and objectives?
4. Are the present goals and objectives based on:
   - individual learners and how they learn?
   - society and its needs?
   - organized knowledge?

Once the commitment has been made by school personnel to conduct a program evaluation an action plan should be developed. The evaluation process as suggested here consists of eight major activities. Their logical progression in the program evaluation process is outlined in the model on the following page. Each of the activities, which may be changed as required to meet the needs of the individual school district, is discussed.


Activity 1
SPECIFY PURPOSE
Identify Program Goals and Objectives To Be Evaluated
Activity 2
SPECIFY DATA SOURCES
Identify Program Factors Relevant to the Attainment of Objectives
Activity 3
SPECIFY CRITERIA
For Each Identified Factor, Develop a Set of Criteria That Would Indicate Attainment of Objectives
Activity 4
SPECIFY INSTRUMENTS
Select or Design Appropriate Instruments to Assess Each Factor According to Specified Criteria
Activity 5
SPECIFY DATA COLLECTION PROCEDURES
Activity 6
SPECIFY DATA COMPARISON TECHNIQUES
Identify Techniques to Be Used in Comparing Collected Data with Desired Results
Activity 7
SPECIFY DEGREE OF VARIANCE
Identify the Degree of Variance Between Program Goals and Objectives and Program Outcomes
Activity 8
REPORT FINDINGS

Program Evaluation Process Model

## Activity 1
## SPECIFY PURPOSE
## IDENTIFY PROGRAM GOALS AND OBJECTIVES TO BE EVALUATED

Points for Consideration:

1. Will all goals and objectives for the program be evaluated?
2. Will only certain goals and objectives be evaluated?
3. Should the goals and objectives be ranked as to their importance to relevant groups (students, teachers, administrators, parents)?

Performance Task:

1. Make a list of the goals and objectives to be evaluated.

Activity 2

SPECIFY DATA SOURCES
IDENTIFY PROGRAM FACTORS RELEVANT TO THE ATTAINMENT OF OBJECTIVES

Points for Consideration:

1. What aspects of student achievement should be considered?
2. Other factors relevant to the attainment of objectives may be:
   A. Teacher behavior.
   B. Learning activities.
   C. Student attitudes.
   D. Tests.
   E. Textbooks.
   F. Classroom environment.

Performance Task:

1. Decide which of these factors are to be studied in the evaluation process.

Activity 3

SPECIFY CRITERIA
FOR EACH IDENTIFIED FACTOR, DEVELOP A SET OF CRITERIA THAT WOULD INDICATE ATTAINMENT OF OBJECTIVES

Points for Consideration:

1. What kind of information is needed to give evidence of the program's success?
2. For each factor, what criteria or evaluation standards need to be established?

Performance Task:

1. For each factor list criteria to be used in making a judgment about the program's success.

Activity 4

SPECIFY INSTRUMENTS
SELECT OR DESIGN APPROPRIATE INSTRUMENTS TO ASSESS EACH FACTOR ACCORDING TO CRITERIA OUTLINED

Points for Consideration:

1. Are appropriate instruments available for the evaluation of each factor?
2. Do evaluation instruments have to be designed for any of the factors?
3. If instruments need to be designed, who will be responsible for this?

Performance Tasks:

1. Select instruments to be used for evaluating identified factors.
2. Design and validate instruments to be used for evaluating identified factors.

Activity 5

SPECIFY DATA COLLECTION PROCEDURES

Points for Consideration:

1. What data do we already have?
2. What kinds of additional data should be gathered?
3. Who will be responsible for collecting data?
4. How often will data be collected?
5. How long will it take to collect data for all identified factors?

Performance Tasks:
1. Establish a calendar of evaluation activities.
2. Establish committees and make them responsible for certain areas of data collection.

Activity 6
SPECIFY DATA COMPARISON TECHNIQUES
IDENTIFY TECHNIQUES TO BE USED
COMPARING COLLECTED DATA WITH DESIRED RESULTS

Points for Consideration:
1. Have all the necessary data been collected?
2. Who will be responsible for comparing the actual data with the desired results?
3. What techniques will be used to compare the data collected with the desired results?
4. What methods will be used to interpret the data?

Performance Tasks:
1. Appoint data review committee.
2. Carefully examine the information gathered.
3. Specify how information from each source will be used in a final interpretation of data.
4. Determine methods that will be used to interpret the data.

Activity 7
SPECIFY DEGREE OF VARIANCE
IDENTIFY THE DEGREE OF VARIANCE BETWEEN
PROGRAM GOALS AND OBJECTIVES AND PROGRAM OUTCOMES

Points for Consideration:
1. In what areas is there a match between data collected and desired outcomes?
2. In what areas is there a variance between data collected and desired outcomes?
3. What aspects of the program appear responsible for the variance?
4. What action can be taken to improve that area of the program?

Performance Tasks:
1. Give recognition to successful aspects of the program.
2. Identify areas of the program where there is a variance between data collected and desired outcomes.

Activity 8
REPORT FINDINGS

Points for Consideration:
1. What information should be included in the report?
2. For whom will the report be written?
3. What format and style of reporting will best communicate the information to the intended audiences?

Performance Tasks:

1. Prepare the written evaluation report.
2. Share the report with the intended audiences.
3. Initiate activities designed to implement the needed changes in the program.

**DEPARTMENT OF EDUCATION PUBLICATIONS WHICH MAY BE USED FOR PROGRAM EVALUATION ARE:**

A SELF-APPRAISAL CHECKLIST FOR:

Physical Education in Ohio's Elementary Schools, 1977
Physical Education in Ohio's Secondary Schools, 1977
Intramurals in Ohio's Elementary & Secondary Schools, 1977
School Health Programs, 1976
Language Arts in Ohio's Elementary Schools, 1980
Language Arts in Ohio's Secondary Schools, 1980
Science in Ohio's Elementary Schools, 1980
Science in Ohio's Secondary Schools, 1980
Mathematics in Ohio's Elementary Schools, 1980
Mathematics in Ohio's Secondary Schools, 1980
Social Studies in Ohio's Elementary Schools, 1980
Social Studies in Ohio's Secondary Schools, 1980
Foreign Language in Ohio's Secondary Schools, 1980
Nutrition Education in Ohio's Schools, 1980
Library/Media Programs in Ohio's Schools, 1980

These documents are available from:

Ohio Department of Education
Division of Elementary and Secondary Education
65 South Front Street, Room 1005
Columbus, Ohio 43215

Appendices C through F contain samples for each of the major components of the suggested course of study format. These samples are taken from course of study documents presently housed in the Course of Study Library. In using these samples we wish to acknowledge those school districts who granted permission for their use in this document.

Akron City
Beachwood City
Butler County
Centerville City
Cleveland Diocese
Cuyahoga Falls City
Franklin County, Plain Local
Fulton County
Mentor Exempted Village
Muskingum County
Scioto Darby City
Stark County
Upper Arlington City
Worthington City
Modern Language Association of America

In most cases these samples have not been edited or revised. Additionally, these samples are the work of the individual school districts and associations and do not necessarily reflect the views or policies of the Ohio Department of Education.

## APPENDIX C
## SAMPLE PHILOSOPHY STATEMENTS

### Social Studies

We believe the social studies program should promote human dignity, provide for transmission of cultural heritage, and develop the basic skills necessary for active participation in an increasingly complex society. The term social studies designates that portion of the curriculum which deals with human beings' relationship with their social and physical environments. The social studies are concerned with how individuals are influenced by their environment; how they use and modify their environment to satisfy individual and group needs; how custom and institutions have emerged; how human beings attempt to solve current problems; and how they draw upon their experience to plan for the future.

The content utilized in this endeavor is drawn from all the social sciences and related disciplines. The social sciences include anthropology, economics, geography, history, philosophy, political science, psychology, and sociology. It is also recognized that the content of the social studies program is related to and enriched with information from other subjects, such as literature, art, music, health, science, and mathematics. In addition to teaching a body of content, the social studies are concerned with the development of those skills, values, and attitudes that enable the individual to be a responsible member of a democratic society.

### Language Arts

The total language arts program is important to each student regardless of his abilities, interests, and aspirations. It is the means by which he will be prepared to earn a living and to lead a worthwhile life. Through language arts he will better understand the society in which he lives and should be better able to communicate with others and contribute to that society.

In order that the student can become a contributing member of society, he must assimilate the basic skills of language arts, a multifaceted program which develops varying opportunities for the student first to attain and then apply communication skills. Descriptively, the program is composed of different areas: reading, study and reference, composition, speaking and listening, literature, and learning to interpret and deal with the various media used for communication and entertainment in today's world. These skills must be integrated, for the mastery of any one is dependent upon the mastery of the others.

The English language is a practical tool for reasoning and expression, and it has intrinsic beauty in its richness, variety, and continual growth. Its study should commence at the kindergarten level and continue and be refined through grade twelve.

Reading with understanding requires the ability to formulate and express one's thoughts. The study of literature demands the mastery of basic reading skills. In addition, the study of literature helps the student understand universal themes and their application to his life and gives him standards with which to examine his personal values. Therefore, a student must have the opportunity to study all areas of language arts, and he must be held accountable for at least minimal competency in these skills.

Language is the symbolic structure for the thinking process and for this reason language arts is a most important subject in the curriculum.

**Mathematics**

We live in a world which is vastly complex, progressively more demanding, and continuously changing. Political, social, and economic systems are continuously evolving in an effort to accommodate the requirements of a maturing humanity.

Given the context of immense complexity and ongoing evolution, the challenge for education is clear:

1. To insure that every individual is offered the opportunity to develop awareness, understanding, and appreciation of those elements and forces in the environment and within himself/herself which may affect his/her life.
2. To insure that every individual is offered the opportunity to develop skills necessary to use this understanding in a way which contributes to harmonious growth directed toward functioning with himself/herself and the world.

Within the context of the overall philosophy, the challenge of mathematics education is to insure that every individual is offered the opportunity to develop:

1. An awareness of the quantitative and qualitative nature of reality.
2. A systematic approach for making this awareness useful and functional.

## APPENDIX D
## SAMPLE PROGRAM GOAL STATEMENTS

**Foreign Language**

The overall goals in foreign language study are effective communication and cultural understanding.

1. To understand a foreign language when spoken at normal tempo on a subject within the range of pupils' experiences.
2. To speak sufficiently to make direct contact with a native on a subject within the range of pupils' experiences.
3. To read with direct understanding, without recourse to English translation, material on a general subject.
4. To write, using the authentic patterns of the language and without conscious reference to English.
5. To understand linguistic concepts, such as the nature of language and how it functions through its structural system.
6. To understand, through the foreign language, the contemporary values and behavior patterns of the people whose language is being studied.
7. To acquire a knowledge of significant features of the country or area (geographical, cultural, economic, political) where the language being studied is spoken.
8. To develop an appreciation for and an understanding of the literary and cultural heritage of the people whose language is studied.

**Music**

1. Develop their individual sensibilities to the basic components of music through consistent involvement with these components.
2. Develop perceptive and sensitive awareness of the quality of music which they or others produce.

3. Develop their abilities to translate traditional and graphic symbolization into musical sounds with accuracy and precision, as a member of a group or independently.
4. Develop discriminating tastes and positive attitudes toward the quality of musical sound in the environment.
5. Develop an appreciation for their musical heritage and the value of music for improving the quality of life.
6. Develop a sensitivity to the interrelationships between music and the other arts.
7. Develop an awareness of the value of music as it is related to other disciplines and to the quality of life experiences.

**Science**

1. To develop scientific literacy by helping children advance their thinking processes from the concrete to the abstract and develop a disciplined curiosity as they accumulate experiences and ideas.
2. To promote the formation of positive attitudes toward science.
3. To provide opportunity for students to develop skill in creative thinking and problem-solving.
4. To promote an attitude that science, more than being a set body of facts, is a living and changing concept that affects daily life.
5. To develop a sense of responsibility in the students for completion of assignments, regard for equipment, and cooperation during laboratory.
6. To stimulate interest in the various kinds of science hoping that this interest will continue and eventually encourage the student toward further study and a science-related career.
7. To acquaint the student with the natural laws which govern the operation of our earth and the universe in general. To lead the student to an insight into the methods and thought processes that led men to the discovery of these laws by providing background information and laboratory experiences.
8. To enable students to develop skill in finding and using science resource materials and equipment.

## APPENDIX E
## SAMPLE SCOPE AND SEQUENCE PLANS

**Foreign Language**

French I

**Linguistic Objectives**

The students will learn:

- to count from 0 to infinity
- to say where they live
- to talk about their various daily activities
- to express what they like and do not like to do
- to ask questions using *est-ce que*, intonation, inversion
- to answer questions affirmatively and negatively
- to address their friends and their teachers
- to describe themselves and their friends
- to describe everyday objects
- to tell the nationalities of people
- to tell time in full hours

- to name the days of the week and the months of the year
- to tell the date
- to describe the places they go during the week or on weekends
- to describe their city
- to say that they are going home or to a friend's house
- to point out people and objects to their friends
- to talk about their plans for the future
- to give their ages
- to talk about their activities, especially in sports, music and art
- to ask their friends about their activities
- to talk about each member of their families
- to state whether something belongs to them or to other people
- to tell the exact time
- to talk about the foods they like
- to read a French menu and to order a meal in a French restaurant
- to prepare a shopping list
- to make suggestions to their friends
- to give warnings
- to tell how they spend their money
- to compare the prices of various things they buy
- to make comparisons between people or things
- to make generalizations
- to ask and answer questions about their friends
- to state what they know and what they do not know
- to talk about their school and their school life
- to state how much they like school and other activities
- to express their wishes about jobs, careers, vacation, travel, and so forth
- to state an obligation
- to tell what they can do and what they cannot do
- to answer a personality questionnaire
- to talk about how many things they own
- to rank people and things
- to express their opinions
- to talk about their readings
- to buy clothes in a French store and to talk about the clothes they are wearing
- to express what they have just done
- to say what kinds of people and things they like or don't like
- to combine two sentences into one
- to write a letter in French
- to state what they need or what they would like to do
- to describe their symptoms to a French doctor
- to describe past events
- to tell where they went yesterday, last weekend, on their last vacation
- to ask their friends what they have done recently
- to express their beliefs
- to make predictions

- to do some personal planning for the future
- to say what they will do when they are older and richer.

**Cultural Objectives**

- that French is spoken not only in France, but also in other European countries, in Canada, and in North and West Africa
- about French teenagers, about their friends, about the parties they organize, and about the cafe, a favorite meeting place
- about Paris and about Savoie, a province in the French Alps
- about soccer, the French national sport; about ballet, French in origin; and about "La Maison des Jeunes," the equivalent of the American "Y"
- about the French family
- about such aspects of French life as the country fair
- about the attitudes of French teenagers and their parents toward money and part time jobs
- about school life in France
- about the many historical ties which exist between France, the United States, and Canada
- how to write letters in the French manner
- about two French islands, one in the Mediterranean Sea and the other in the South Pacific.

**Social Studies**

SUBJECT: SOCIAL STUDIES

GRADE LEVEL(S): FOURTH GRADE

ACHIEVEMENT LEVEL: General

GRADE LEVEL GOALS:

1. Prepare the student to live in a world of differing value systems.
2. Develop a knowledge of history and its application to today's world.
3. Develop an understanding of world cultures (geographical locations and customs).
4. Develop an understanding that all cultures of the world must work together.
5. Encourage interest in events of today's world.

| TIME | UNIT OBJECTIVES (Teacher Directed Activities) | CONCEPTS/SKILLS (Student Achievements) |
|---|---|---|
| Weeks | | |
| 9 | To develop an understanding of the child's own environment in comparison to that of other people, places, and cultures of the world | People in all parts of the world have different values, norms of behavior, rules, and customs |
| 9 | To develop knowledge of the importance of the past and its relationship to the present | Government is the institution through which cultures maintain social control<br>Government changes as the needs of the people change |
| 9 | To develop an understanding that maps are used to explain many different ideas | Interpret various kinds of maps: political, product and resource, rainfall, population |
| 9 | To recognize that economic behavior depends on the use of resources | Resources are limited and must be conserved by planning wisely and sharing with other peoples |
| Continual | To develop awareness of current events | Develop a continuing interest in current news |

## Language Arts

## Research Study Skills

Goal:

To enable the students to form good study habits through the instruction of note taking and library skills, and to promote the application of both.

| Middle 6-8 | Middle 6-8 |
|---|---|
| Specific Objectives<br>The student should:<br>show that he/she can use a dictionary to locate words and to identify structure and meaning of words<br>use a sample dictionary page to find an example of the following:<br>1) guide word<br>2) entry word<br>3) pronunciation key<br>4) definitions<br>use a dictionary to find syllables, pronunciations, parts of speech, meaning, and synonyms for a given word<br>find prefix and suffix entries in the dictionary – use the entries to form new words<br>use a dictionary to find the meanings of common idioms<br>show that he/she can find information in the library by: finding appropriate materials on a given topic, using the card catalogue to locate the topic call number, author's name, and book titles<br>show that he/she can use reference material to find information in encyclopedias, almanacs, and atlases<br>use cross-references<br>use the reference section of a library to find information in Readers' Guide to Periodical Literature<br>use a thesaurus to expand his/her understanding of words and his/her vocabulary | Specific Objectives<br>The student should:<br>show that he/she can find information for summarizing, making generalizations, and identifying conclusions<br>show that he/she can prepare various types of outlines such as: preparing a word or phrase outline in proper form using one level of indentation, writing a topic outline, and producing an outline for a report using notes collected from various references<br>demonstrate his/her ability to combine concepts, principles, and generalizations by producing a report from notes and an outline |

# Fractions

**BROAD OBJECTIVES**

The student will:

1) Be able to add, subtract, multiply and divide fractions.
2) Understand the concept of a fraction.
3) Know the special types of fractions and the various relationships between fractions.

I – Introduction
S – Spiral
M – Mastery
E – Enrichment
▒ – Application/Maintenance

**SKILL OBJECTIVES**

The student will be able to:

| | | Grade Level | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| A. | IDENTIFICATION | | | | | | | | | |
| A1. | Color the appropriate fractional part of a picture or set. | | I | I/S | S | S/M | M | ▒ | ▒ | ▒ |
| A2. | Write a fraction to represent a shaded portion of a region. | | I | I/S | S | S/M | M | ▒ | ▒ | ▒ |
| A3. | Write a fraction to represent a designated part of a set. | | | | I | I/S | S | S/M | M | ▒ |
| A4. | Read and write fractional numbers. | | | | I | I/S | S/M | M | | ▒ |
| A5. | Identify the numerator and denominator of a fraction. | | | | I | I/S | S | S/M | M | ▒ |
| A6. | Define unit fractions. | | | | I | I/S | S/M | M | ▒ | ▒ |
| A7. | Write mixed numerals from information given in pictures. | | | | I | I/S | S/M | M | ▒ | ▒ |
| A8. | Write fractional names for whole numbers (e.g., 1 = 4/4). | | | | I | I/S | S | S | S/M | M |
| A9. | State what the numerator and denominator stands for. | | | | I | I/S | S | S | S/M | M |
| A10. | Identify fractions on a number line. | | | | I | I/S | S | S | S/M | M |
| A11. | Write fractional numeral given its word name. | | | | | I | I/M | M | ▒ | ▒ |
| A12. | Find fractional parts of a set given the number of members of the set. | | | | | I | I/S | S | S/M | M |
| A13. | Identify proper fractions, improper fractions, complex and mixed numbers. | | | | | I | I/S | S/M | M | ▒ |
| A14. | Demonstrate knowledge that reciprocals (multiplicative inverses) are pairs of numbers having a product of one. | | | | | | I | I/S | S/M | M |
| B. | SIMPLIFICATION | | | | | | | | | |
| B1. | Rename improper fractions as mixed numbers and vice versa. | | | | | I | I/S | S | S | M |

| | Grade Level | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **B. SIMPLIFICATION (continued)** | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| B2. Reduce fractions to lowest terms. | | | | | I | I/S | S | S | M |
| **C. COMPARING** | | | | | | | | | |
| C1. Compare ( $<$, $>$, = ) two fractions having the same denominator using a model as an aid. | | | | I | I/S | S/M | M | | |
| C2. List sets of equivalent fractional numbers by observing patterns. | | | | I | I/S | S | S/M | M | |
| C3. Write sets of equivalent fractional numbers by observing both numerator and denominator by the same number. | | | | I | I/S | S | S/M | M | |
| C4. Find equivalent fractional numbers. | | | | I | I/S | S | S/M | M | |
| C5. Write fractional equivalents for zero (e. g., 0 = 0/5 = 0/3, etc.). | | | | | I | M | | | |
| C6. Compare two fractions having equal numerators. | | | | | I | I/S | S/M | M | |
| C7. Compare unit fractions. | | | | | I | I/S | S/M | M | |
| C8. Compare fractions with different denominators. | | | | | I | I/S | S | S/M | M |
| C9. Find the least common denominator. | | | | | I | I/S | S/M | M | |
| C10. Compare fractions by finding the least common denominator. | | | | | I | I/S | S | S/M | M |
| C11. Compare fractional numbers by comparing cross products. | | | | | | I/S | I/S | S/M | M |
| **D. ADDITION** | | | | | | | | | |
| D1. Add like fractions with remaining of sums equal to or greater than one. | | | | | I | I/S | S/M | M | |
| D2. Add fractions with different denominators. | | | | | I | I/S | S | S/M | M |
| D3. Add fractions on the number line. | | | | | | I | I/S | S/M | M |
| D4. Add mixed numbers. | | | | | | I | I/S | S/M | M |
| D5. Add fractions, reducing to lowest terms. | | | | | | I | I/S | S/M | M |
| D6. Add fractions and express the sum as a whole or mixed number, where appropriate. | | | | | | I | I/S | S/M | M |
| D7. Add mixed numbers, renaming when necessary. | | | | | | I | I/S | S/M | M |

**Science**

**Space and Astronomy**

| The student will understand: | Major Grade | Emphasis Level |
|---|---|---|
| A. Stars | | |
| 1. The universe is all of space and everything in it. | 3-4 | 5-6 |
| 2. Stars differ in size and brightness. | 3-4 | |
| 3. Stars can be arranged in definite patterns called constellations (Little Dipper, Big Dipper, North Star). | 5-6 | 7-9 |
| 4. The brightness of a star depends on how much light it is producing and how much distance between us and the stars. | 5-6 | 7-9 |
| 5. The sun is a star. | 5-6 | |
| 6. A galaxy is made up of billions of stars. The Milky Way Galaxy is the galaxy in which we live. | 5-6 | 7-9 |
| 7. Light years measure the distance in space. | 5-6 | 7-9 |
| B. Sun | | |
| 1. The sun is a star. All stars are suns. | 5-6 | |
| 2. The sun is not the hottest or largest star; it is the closest. | 5-6 | |
| 3. The sun is a source of energy (i.e. solar energy). | 3-4<br>5-6 | 7-9 |
| 4. The sun is a mass of hot gases. Many natural elements have been found in the sun's gases. | 5-6 | |
| 5. Effects of sun's activity on earth (Solar winds, sun spots, etc.). | 7-9 | |
| C. Solar System | | |
| 1. Earth is the planet on which we live. | K-2 | 3-4 |
| 2. Nine planets and their satellites travel around the sun. The paths of the planets are called orbits. | 3-4 | 5-6 |
| 3. The planets are held in their orbits by the pull of gravity. | 3-4 | 5-6 |
| 4. Comets, meteors, and planetoids travel within the solar system. | 5-6 | 7-9 |
| 5. The earth rotates on its axis one complete turn in 24 hours. An axis is an imaginary line connecting the north-south poles. | 3-4 | 5-6 |
| 6. The earth revolves around the sun once a year. | 3-4 | 5-6 |
| 7. The lengths of day and night are dependent upon the location of the earth in its orbit around the sun. | 5-6 | 7-9 |
| 8. An eclipse occurs when one heavenly body blocks the light from another body | 5-6 | 7-9 |
| D. Moon | | |
| 1. The moon is the earth's only natural satellite. Not man made. | 5-6 | 7-9 |
| 2. The moon's phases are caused by it's movement around the earth (full moon, half moon). | 5-6 | 7-9 |
| 3. The moon's gravity is not as strong as the earth's. | 3-4<br>5-6 | 7-9 |

| | | |
|---|---|---|
| 4. The facts gathered about the surface of the moon are based on direct observation rather than indirect evidence (i.e. space travel). | 5-6 | 7-9 |
| 5. Tides are related to the phases of the moon. | 5-6 | |
| 6. Seasons, months days, and nights are related to the relative positions of the sun, moon, and earth. | 5-6 | |
| E. Space Exploration | | |
| 1. Man has gained knowledge about space due to the contributions of astronauts, Apollo missions, and Satellites. Discuss the contributions of men from Ohio such as: a. John Glenn b. Neil Armstrong | 3-4 | 5-6 |
| 2. Uses of man made satellites. | 7-9 | |

EMPHASIS

The purpose of a child studying space and astronomy is that they will be able to understand the relationship of the sun, moon, stars, earth, and space exploration. The emphasis is not on remembering exact details, but on acquiring a basic understanding of our universe.

## APPENDIX F
## SAMPLE EVALUATION AND PROCEDURES

**Social Studies**

REQUIREMENT An evaluation process is required as a part of the graded course of study. Specifically, there must be provisions for measuring the outcomes of instruction in relation to established goals and objectives.

DEFINITION Evaluation has been defined as a continuous process of determining or judging the value or amount of something by careful appraisal. From the perspective of this graded course of study, and through the guidelines which follow, this process will include the basic considerations of assessing both Program and Student.

PROGRAM Program assessment is a mutual, cooperative procedure that involves each local district and county office personnel in:

- conducting item analyses of standardized test results to determine broad areas of strength and/or weakness in the program.
- determining procedures for evaluating existing educational programs in terms of the graded course of study goals and objectives.
- initiating procedures for the review/revision provisions of the graded course of study (outlined in "Introduction")
- evaluating teachers' lesson plans to ensure that they reflect implementation of program goals and objectives.
- conducting end of the year assessment of the graded course of study, using feedback to determine minor revisions.

*STUDENT*

A variety of issues and considerations are involved in the all-important process of student evaluation, beginning with observations about the evaluation process itself:

- evaluation includes a needs assessment procedure to establish a starting point from which a student is measured.
- evaluation recognizes the learning potential of students.
- evaluation is positive and is always used to help the student in the learning process.

TEACHER

Assessment by the teacher considers:

- achievement tests and interest inventories.
- item analyses.
- class range of scores.
- class median scores.
- skills learned.
- student's ability to apply skills.
- level of each student's interest toward learning.
- appropriate individual diagnostic techniques.

Prescription by the teacher includes:

- stimulating interests of the students.
- channeling those interests toward course goals through diverse instructional materials.
- providing means of skill development through exercises and activities which require student performance.

PROCEDURES

A policy should be established by each local district for both formative and summative evaluation. Formative refers to the data collection procedures and evaluation judgments made during instruction, the primary use of the information being to improve instruction. Summative refers to the data collection and evaluation judgments made after instruction, the primary questions being: "Has the student learned?" and "Has the teacher taught?" Items to be considered are:

- purposes of evaluation in each situation (evaluation vs. testing; achievement vs. effort).
- types of evaluations that can be used (observation, standardized tests, teacher-made tests).
- frequency with which students are tested (once a week/month/semester or more frequently).

- components which should be included in the determination of a final grade (quizzes, final examination, oral presentation, laboratory reports, independent projects/reports, classroom behavior, study habits).
- extent to which there should be student self-evaluation.
- types of tests that should be used (multiple choice, true/false, matching, essay, multifaceted questions, reports).

Policies developed by each local district should include:

- considerations for promotion, retention, and intervention.
- a means of communicating policies to teachers, parents, and the community.

**Science**

EVALUATION OF STUDENT PERFORMANCE

The following section on evaluation is the product of a committee endeavor of teachers, psychologists, administrators, a parent, a student, and a board of education member. Evaluation is viewed as the procedures related to the acquiring and the processing of information needed to improve teaching and student learning. The following general observations regarding the evaluation procedures of student performance are applicable to all subject areas. Specific evaluation samples and/or suggested evaluation procedures for the science program are supplied in each instructional unit.

I. WHAT INFORMATION IS NEEDED AND WHY?

Data about student performance are needed to:

A. *Plan for instruction* in keeping with individual student needs (i.e., for grouping students, for selecting materials, and for identifying methods most likely to enhance student learning and progress).

For this purpose we must assess:

- the location of students on the various learning continua,
- the commonality and variations in learning styles and learning rates among students,
- the commonality and variations in interests and motivational factors among students, and
- the special needs of individual students.

B. *Assess student progress* by securing measures of the extent to which instructional objectives have been achieved before and after instruction.

C. *Evaluate program impact* as a basis for review and renewal of curriculum guides and educational planning.

For this purpose we must know:

- the extent to which the student body is meeting broad, curricular objectives, and is making progress in keeping with the community expectations; and
- the effects on student progress of regular and innovative programs.

## II. HOW CAN THE INFORMATION BE OBTAINED?

The selection of specific techniques will be influenced by the instructional, reporting, and administrative purposes to be served. Consideration should be given to selecting information-collecting techniques and instruments that are broad enough in scope to provide data that can be used for a variety of purposes. Procedures and techniques must measure consistently what is intended. Because of the margin of error inherent in subjective and objective evaluation techniques, more than one type of instrument or method should be used for obtaining desired information. Teacher judgment regarding the student's work and the scores on objective tests serve as checks on one another and bring to light errors and inconsistencies that call for further investigation.

A. The following are some possible examples of subjective evaluation:

- observation of student behavior under various situations;
- rating of written and oral reports, projects, and task or job performance;
- grading of essay-type tests;
- student self-evaluations, attitude surveys, interest inventories;
- individual conferences with students; and
- parental feedback and employer reports.

B. The following are some possible examples of objective evaluation techniques:

- standardized, multiple choice, and short answer tests; and
- time sampling and other formalized observation techniques.

**Language Arts**

### SUGGESTED EVALUATIVE PROCEDURES

Teachers should follow planned and clearly defined procedures for evaluating their students' learning and progress in the field of English regardless of the grading system used.

Some evaluative procedures for ascertaining the extent to which objectives relative to various concepts and skills in the area of English have been achieved by students are given below.

A. Listening

1. Teacher-directed exercises, and activities such as dictation and note-taking
2. Teacher assessment of the degree of student receptivity by accuracy of student's oral and written response

B. Multisensory Experiencing

1. Teacher observation of student's reaction, and interaction to and with people, environment, and media
2. Teacher assessment of student's participation in discussion following experiences gained through interaction with various types of media
3. Teacher appraisal of student's response (through speech, writing, art, or music) to interaction with people, environment, and various types of media

4. Teacher evaluation of student's projects related to multisensory experiencing
5. Teacher-constructed essay tests and objective tests designed to ascertain in a general way the extent to which the student effectively uses his or her senses in further developing the skills of the communication arts.

C. Speaking and Writing

1. Oral and written critiques by students and teacher of student's speaking and writing
2. Teacher evaluation of student's projects related to speaking and writing
3. Teacher examination of student's writing for elements of composition including mechanics, usage, paragraph development and form
4. Teacher-constructed essay and objective tests for spelling, usage, and mechanics of speaking and writing
5. Standardized tests for spelling, usage, and mechanics of writing; e.g., *Iowa Test of Basic Skills.*

D. Reading

1. Teacher observation of student's participation in class and group discussion
2. Teacher appraisal of student reports related to reading
3. Teacher-constructed essay and objective tests for vocabulary and reading comprehension
4. Standardized tests for vocabulary and reading comprehension.

## APPENDIX G

Sample action verbs for use in writing program goals and objectives.

| | | | | |
|---|---|---|---|---|
| accept | contact | formulate | predict | stipulate |
| acknowledge | convince | give | present | study |
| administer | correlate | guide | promote | suggest |
| aid | demonstrate | identify | provide | supply |
| analyze | describe | illustrate | recognize | support |
| apply | design | inform | record | supervise |
| approve | determine | interpret | refer | uphold |
| arrange | devise | invite | reinforce | use |
| assess | direct | involve | represent | work |
| assign | employ | keep | review | write |
| assist | engage | lead | schedule | |
| check | enrich | maintain | select | |
| collect | establish | match | sequence | |
| communicate | evaluate | obtain | serve | |
| compile | examine | organize | solicit | |
| conduct | expand | participate | speak | |
| consult | express | plan | specify | |

## ACKNOWLEDGMENTS

The Ohio Department of Education wishes to acknowledge the guidance, assistance, and contributions of the following educators in preparing this publication:

Cel Aman
Director of Instruction
Stark County Schools
Louisville, Ohio 44641

Thomas Ash
Assistant Superintendent
East Liverpool City Schools
East Liverpool, Ohio 43920

Norma Axline
Elementary Supervisor
Perry County Schools
New Lexington, Ohio 43764

Joseph Flege
Assistant Superintendent
Sycamore City Schools
Cincinnati, Ohio 45242

Richard Harpster
Superintendent
Williams County Schools
Bryan, Ohio 43506

Bruce E. Hawkins
Administrative Assistant
Knox County Schools
Mount Vernon, Ohio 43050

James Hogan
Curriculum Director
Forest Hills Local Schools
Cincinnati, Ohio 45231

Walter M. Jones
Director of Secondary Education
Trumbull County Schools
Warren, Ohio 44482

Ronald Kendall
Director of Instruction
Mahoning County Schools
Youngstown, Ohio 44503

Douglas McClintock
Coordinator
Lake County Schools
Painesville, Ohio 44077

Robert Olsson
Assistant Superintendent
Milford Exempted Village Schools
Milford, Ohio 45150

Basilda Rockhold
Coordinator
Hardin County Schools
Kenton, Ohio 43326

Darrell Root
Assistant Superintendent
Lakota Local Schools
West Chester, Ohio 45069

Andrew L. Sim
Director of Curriculum and Instruction
Columbiana County Schools
Lisbon, Ohio 44432

Garnet Simpson
Secondary Supervisor
Fulton County Schools
Wauseon, Ohio 43567

Greta Suttle
Elementary Supervisor
Meigs County Schools
Pomeroy, Ohio 45769

James Walker
Superintendent
Preble County Schools
Eaton, Ohio 45320

William Whitaker
Assistant Superintendent
Northwest Local Schools
Cincinnati, Ohio 45239